

Title (en)

ARTICLES INCLUDING UNTWISTED FIBERS AND METHODS OF USING THEM

Title (de)

ARTIKEL MIT NICHTVERWUNDENEN FASERN UND VERFAHREN ZUR VERWENDUNG DAVON

Title (fr)

ARTICLES COMPRENANT DES FIBRES NON TORDUES ET LEURS PROCÉDÉS D'UTILISATION

Publication

EP 2931517 A4 20160720 (EN)

Application

EP 13860055 A 20131127

Priority

- US 201261734715 P 20121207
- US 201361782129 P 20130314
- US 2013072251 W 20131127

Abstract (en)

[origin: US2014162020A1] Certain embodiments described herein are directed to composite materials comprising untwisted fibers. In some embodiments, the article can include a core layer comprising a thermoplastic polymer and reinforcing fibers. In other embodiments, untwisted fibers can be disposed on the core layer. In certain examples, the article is effective to provide a Class A finish when painted.

IPC 8 full level

B32B 5/28 (2006.01); **B32B 5/12** (2006.01); **B32B 5/18** (2006.01); **B32B 5/24** (2006.01); **B32B 5/26** (2006.01); **B32B 17/02** (2006.01); **B32B 27/06** (2006.01); **B32B 27/26** (2006.01); **B32B 27/32** (2006.01)

CPC (source: EP US)

B32B 5/02 (2013.01 - EP US); **B32B 5/12** (2013.01 - EP US); **B32B 5/22** (2013.01 - EP US); **B32B 5/26** (2013.01 - EP US); **B32B 17/02** (2013.01 - EP US); **B32B 27/08** (2013.01 - EP US); **B32B 27/12** (2013.01 - EP US); **B32B 27/18** (2013.01 - EP US); **B32B 27/28** (2013.01 - EP US); **B32B 27/281** (2013.01 - EP US); **B32B 27/285** (2013.01 - EP US); **B32B 27/288** (2013.01 - EP US); **B32B 27/302** (2013.01 - EP US); **B32B 27/306** (2013.01 - EP US); **B32B 27/308** (2013.01 - EP US); **B32B 27/32** (2013.01 - EP US); **B32B 27/34** (2013.01 - EP US); **B32B 27/36** (2013.01 - EP US); **B32B 27/365** (2013.01 - EP US); **B32B 27/40** (2013.01 - EP US); **B32B 27/42** (2013.01 - EP US); **C03C 25/103** (2013.01 - EP); **C03C 25/26** (2013.01 - EP); **C03C 25/30** (2013.01 - EP); **B32B 2260/021** (2013.01 - EP US); **B32B 2260/046** (2013.01 - EP US); **B32B 2262/02** (2013.01 - EP US); **B32B 2262/06** (2013.01 - EP US); **B32B 2262/08** (2013.01 - EP US); **B32B 2262/10** (2013.01 - EP US); **B32B 2262/101** (2013.01 - EP US); **B32B 2262/103** (2013.01 - EP US); **B32B 2262/105** (2013.01 - EP US); **B32B 2262/106** (2013.01 - EP US); **B32B 2270/00** (2013.01 - EP US); **B32B 2307/538** (2013.01 - EP US); **B32B 2307/72** (2013.01 - EP US); **B32B 2419/00** (2013.01 - EP US); **B32B 2605/00** (2013.01 - EP US); **Y10T 428/24124** (2015.01 - EP US); **Y10T 428/24132** (2015.01 - EP US); **Y10T 428/24952** (2015.04 - EP US)

Citation (search report)

- [X] US 2007269645 A1 20071122 - RAGHAVENDRAN VENKAT [US], et al
- See references of WO 2014088905A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 10384418 B2 20190820; **US 2014162020 A1 20140612**; AU 2013356368 A1 20150723; AU 2013356368 B2 20170803; CA 2893854 A1 20140612; CA 2893854 C 20210216; CN 104903087 A 20150909; CN 104903087 B 20190802; EP 2931517 A1 20151021; EP 2931517 A4 20160720; EP 2931517 B1 20210929; ES 2900804 T3 20220318; JP 2015536853 A 20151224; JP 6571004 B2 20190904; KR 102197486 B1 20201231; KR 20150093745 A 20150818; WO 2014088905 A1 20140612

DOCDB simple family (application)

US 201314092038 A 20131127; AU 2013356368 A 20131127; CA 2893854 A 20131127; CN 201380069665 A 20131127; EP 13860055 A 20131127; ES 13860055 T 20131127; JP 2015546518 A 20131127; KR 20157017744 A 20131127; US 2013072251 W 20131127